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Fig. 1A

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*5   10   15   20   25   30   35   40   45   50   55   60   65   70
*   *   *   *   *   *   *   *   *   *   *   *   *
GAATTOGGCA CGAGCAACA GTCATTAGTG GACGACTCTA TTGTAATAAA CTGTGCTTAA AAATGTAAAC

75   80   85   90   95  100  105  110  115  120  125  130  135
*   *   *   *   *   *   *   *   *   *   *   *
CAGGGAGOGT TTTTTTTOCT CACATTGTGC AGAAGCAAC TTTCTTCTG AGOCTGGATT AATC ATG
H>

140   145   150   155   160   165   170   175   180   185   190
*   *   *   *   *   *   *   *   *   *   *
AGA GAG CTC GTC AAC ATT OCA CTG TTA CAG ATG CTC ACC CTG GTT GOC TTC AGC GGG
R E L V N I P L L Q H L T L V A F S G>

195   200   205   210   215   220   225   230   235   240   245   250
*   *   *   *   *   *   *   *   *   *   *
ACC GAG AAA CTT OCA AAA GOC OCT GTC ATC ACC ACG OCT CTT GAA ACT GTA GAT GOC
T E K L P K A P V I T T P L E T V D A>

255   260   265   270   275   280   285   290   295   300   305
*   *   *   *   *   *   *   *   *   *   *
TTA GTT GAA GAA GTG GOG ACT TTC ATG TGC GOC GTG GAA TCC TAC OCT CAG OCT GAA
L V E E V A T F H C A V E S Y P Q P E>

310   315   320   325   330   335   340   345   350   355   360   365
*   *   *   *   *   *   *   *   *   *   *
ATT TCT TGG ACC AGA AAT AAA ATT CTC ATC AAG CTG TTT GAC ACC GGC TAC AGC ATC
I S W T R N K I L I K L F D T R Y S I>

370   375   380   385   390   395   400   405   410   415   420
*   *   *   *   *   *   *   *   *   *   *
OGA GAG AAC GGT CAG CTC CTC ACC ATC CTG AGT GTG GAG GAC AGT GAT GAT GGC ATC
R E N G Q L L T I L S V E D S D D G I>

425   430   435   440   445   450   455   460   465   470   475
*   *   *   *   *   *   *   *   *   *   *
TAC TGC TGC ACA GOC AAC AAT GGA GTG GGA GGA GOG GTG GAA AGT TGT GGC GOC CTG
Y C C T A N N G V G G A V E S C G A L>

480   485   490   495   500   505   510   515   520   525   530   535
*   *   *   *   *   *   *   *   *   *   *
CAA GTG AAG ATG AAG OCT AAA ATA ACT OGT OCT COC ATC AAT GTA AAA ATA ATT GAG
Q V K M K P K I T R P P I N V K I I E>

540   545   550   555   560   565   570   575   580   585   590
*   *   *   *   *   *   *   *   *   *   *
GGA TTG AAA GCA GTC CTA OCG TGC ACT ACG ATG GGT AAC OCG AAG OCA TOC GTG TOC
G L K A V L P C T T H G N P K P S V S>

595   600   605   610   615   620   625   630   635   640   645   650
*   *   *   *   *   *   *   *   *   *   *
TGG ATT AAG GGG GAC AGT GCT CTC AGG GAA AAT TOC AGG ATT GCA GTT CTT GAA TCT
W I K G D S A L R E N S R I A V L E S>

655   660   665   670   675   680   685   690   695   700   705
*   *   *   *   *   *   *   *   *   *   *
GGG AGT TTA AGG ATC CAT AAT GTG CAA AAG GAA GAC GCA GGA CAG TAC OGA TGT GTG
G S L R I H N V Q K E D A G Q Y R C V>

710   715   720   725   730   735   740   745   750   755   760
*   *   *   *   *   *   *   *   *   *   *
GCA AAA AAC AGC CTG GGC ACA GCT TAC TOC AAA CTG GTG AAG CTG GAA GTG GAG GTT
A K N S L G T A Y S K L V K L E V E V>

765   770   775   780   785   790   795   800   805   810   815   820
*   *   *   *   *   *   *   *   *   *   *
TTT GCA AGA ATC CTG OGT GCT OCT GAA TOC CAC AAT GTC ACC TTT GGT TOC TTT GTA
F A R I L R A P E S H N V T F G S F V>

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Fig. 1B

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      825      830      835      840      845      850      855      860      865      870      875
      *      *      *      *      *      *      *      *      *      *
AOC CTA CGC TGC ACA GCA ATA GGC ATG OCT GTC COC AOC ATC AGC TGG ATT GAA AAC
T   L   R   C   T   A   I   G   M   P   V   P   T   I   S   W   I   E   N>

880      885      890      895      900      905      910      915      920      925      930      935
      *      *      *      *      *      *      *      *      *      *
GGA AAT GCT GTT TCT TCA GGT TOC ATT CAA GAG AAT GTG AAA GAC OGA GTG ATT GAC
G   N   A   V   S   S   G   S   I   Q   E   N   V   K   D   R   V   I   D>

      940      945      950      955      960      965      970      975      980      985      990
      *      *      *      *      *      *      *      *      *      *
TCA AGA CTC CAG CTC TTT ATC ACA AAG OCA GGA CTC TAC ACA TGC ATA GCT ACC AAT
S   R   L   Q   L   F   I   T   K   P   G   L   Y   T   C   I   A   T   N>

995      1000      1005      1010      1015      1020      1025      1030      1035      1040      1045
      *      *      *      *      *      *      *      *      *      *
AAG CAT GGA GAG AAA TTC AGT ACC GCA AAG GCT GCA GGC ACT GTC AGT ATA GCA GAA
K   H   G   E   K   F   S   T   A   K   A   A   A   T   V   S   I   A   E>

1050      1055      1060      1065      1070      1075      1080      1085      1090      1095      1100      1105
      *      *      *      *      *      *      *      *      *      *
TGG AGC AAA TCA CAG AAA GAA AGC AAA GGC TAC TGT GGC CAG TAC AGA GGG GAG GTG
W   S   K   S   Q   K   E   S   K   G   Y   C   A   Q   Y   R   G   E   V>

      1110      1115      1120      1125      1130      1135      1140      1145      1150      1155      1160
      *      *      *      *      *      *      *      *      *      *
TGT GAT GGC GTC CTG GTG AAA GAC TCT CTT GTC TTC TTC AAC AOC TOC TAT COC GAC
C   D   A   V   L   V   K   D   S   L   V   F   F   N   T   S   Y   P   D>

1165      1170      1175      1180      1185      1190      1195      1200      1205      1210      1215      1220
      *      *      *      *      *      *      *      *      *      *
OCT GAG GAG GGC CAA GAG CTG CTG ATC CAC ACT GCG TGG AAT GAA CTC AAG GCT GTG
P   E   E   A   Q   E   L   L   I   H   T   A   W   N   E   L   K   A   V>

      1225      1230      1235      1240      1245      1250      1255      1260      1265      1270      1275
      *      *      *      *      *      *      *      *      *      *
AGC OCA CTC TGC OGA OCA GCT GGC GAG GCT CTG CTG TGT AAT CAC CTC TTC CAG GAG
S   P   L   C   R   P   A   A   E   A   L   L   C   N   H   L   F   Q   E>

1280      1285      1290      1295      1300      1305      1310      1315      1320      1325      1330
      *      *      *      *      *      *      *      *      *      *
TGC AGC OCT GGA GTG CTA OCT ACT OCT ATG COC ATT TGC AGA GAG TAC TGC TTG GCA
C   S   P   G   V   L   P   T   P   M   P   I   C   R   E   Y   C   L   A>

1335      1340      1345      1350      1355      1360      1365      1370      1375      1380      1385      1390
      *      *      *      *      *      *      *      *      *      *
GTA AAG GAG CTC TTC TGT GCA AAG GAA TGG CTG GCA ATG GAA GGG AAG AOC CAC OGC
V   K   E   L   F   C   A   K   E   W   L   A   M   E   G   K   T   H   R>

      1395      1400      1405      1410      1415      1420      1425      1430      1435      1440      1445
      *      *      *      *      *      *      *      *      *      *
GGA CTC TAC AGA TOC GGG ATG CAT TTC CTC COG GTC COG GAG TGC AOC AAG CTT COC
G   L   Y   R   S   G   M   H   F   L   P   V   P   E   C   S   K   L   P>

1450      1455      1460      1465      1470      1475      1480      1485      1490      1495      1500      1505
      *      *      *      *      *      *      *      *      *      *
AGC ATG CAC CAG GAC CCC ACA GGC TGC ACA AGA-CTG COG TAT TTA GAT TAT AAA AAA
S   M   H   Q   D   P   T   A   C   T   R   L   P   Y   L   D   Y   K   K>

      1510      1515      1520      1525      1530      1535      1540      1545      1550      1555      1560
      *      *      *      *      *      *      *      *      *      *
GAA AAC ATA ACA ACA TTC CCG TOC ATA AOG TOC TOC AAG COG AOC GTG GAC ATT OCA
E   N   I   T   T   F   P   S   I   T   S   S   K   P   S   V   D   I   P>

1565      1570      1575      1580      1585      1590      1595      1600      1605      1610      1615
      *      *      *      *      *      *      *      *      *      *
AAC CTG OCT GGC TOC ACG TCT TCC TTC GGC GTC TOG CCT GOG TAC TOC ATG ACT GTC
N   L   P   A   S   T   S   S   F   A   V   S   P   A   Y   S   M   T   V>

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Fig. 1C

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1620 1625 1630 1635 1640 1645 1650 1655 1660 1665 1670 1675
*      *      *      *      *
ATC ATC TOC ATC ATG TOC TGC TTT GCG GTG TTT GCT CTC CTC AOC ATC ACT ACT CTC
I I S I M S C F A V F A L L T I T T L>

1680 1685 1690 1695 1700 1705 1710 1715 1720 1725 1730
*      *      *      *      *
TAT TGC TGC CGA AGG AGG AGA GAG TGG AAA AAT AAG AAA AGA GAG TOG GCA GCG GTG
Y C C R R R R E W K N K K R E S A A V>

1735 1740 1745 1750 1755 1760 1765 1770 1775 1780 1785 1790
*      *      *      *      *
AOC CTC AOC ACA TTG OCT TOC GAG CTC CTG CTG GAC AGG CTG CAT CCG AAC CCG ATG
T L T T L P S E L L L D R L H P N P M>

1795 1800 1805 1810 1815 1820 1825 1830 1835 1840 1845
*      *      *      *      *
TAC CAG AGG ATG OCA CTC CTT CTG AAT CCG AAG TTG CTC AGC CTG GAG TAT CCG AGG
Y Q R M P L L L N P K L L S L E Y P R>

1850 1855 1860 1865 1870 1875 1880 1885 1890 1895 1900
*      *      *      *      *
AAT AAC ATC GAG TAT GTC AGA GAC ATC GGA GAG GGA GCG TTT GGA AGG GTC TTT CAA
N N I E Y V R D I G E G A F G R V F Q>

1905 1910 1915 1920 1925 1930 1935 1940 1945 1950 1955 1960
*      *      *      *      *
GCG AGG GCG OCA GGC TTG CTT OCT TAT GAA CCG TTC ACT ATG GTG GCT GTG AAG ATG
A R A P G L L P Y E P F T M V A V K M>

1965 1970 1975 1980 1985 1990 1995 2000 2005 2010 2015
*      *      *      *      *
CTG AAG GAG GAG GCG TOC GCA GAT ATG CAG GCA GAC TTT CAG AGG GAG GCA GCG CTC
L K E E A S A D M Q A D F Q R E A A L>

2020 2025 2030 2035 2040 2045 2050 2055 2060 2065 2070 2075
*      *      *      *      *
ATG GCG GAG TTT GAC AAC CCG AAC ATT GTG AAG CTC TTA GGT GTG TGT GCT GTT GGG
M A E F D N P N I V K L L G V C A V G>

2080 2085 2090 2095 2100 2105 2110 2115 2120 2125 2130
*      *      *      *      *
AAG OCA ATG TGC CTG CTC TTT GAA TAT ATG GCG TAT GGT GAC CTC AAT GAG TTC CTC
K P M C L L F E Y M A Y G D L N E F L>

2135 2140 2145 2150 2155 2160 2165 2170 2175 2180 2185
*      *      *      *      *
OGA AGC ATG TOC OCT CAC ACT GTG TGC AGC CTC AGC CAC AGT GAC CTG TOC ACG AGG
R S M S P H T V C S L S H S D L S T R>

2190 2195 2200 2205 2210 2215 2220 2225 2230 2235 2240 2245
*      *      *      *      *
GCT GCG GTG TOC AGC OCT GGT OCT CCA CCG CTG TCT TGT GCG GAA CAG CTC TGT ATT
A R V S S P G P P P L S C A E Q L C I>

2250 2255 2260 2265 2270 2275 2280 2285 2290 2295 2300
*      *      *      *      *
GCG AGG CAA GTG GCA GCT GCG ATG GCG TAC CTG TOG GAG CCG AAG TTT GTC CAT GCG
A R Q V A A G M A Y L S E R K F V H R>

2305 2310 2315 2320 2325 2330 2335 2340 2345 2350 2355 2360
*      *      *      *      *
GAC TTA GCT ACC AGG AAC TGC CTG GTT GGA GAG AAC ATG GTG GTG AAA ATT GCA GAC
D L A T R N C L V G E N M V V K I A D>

2365 2370 2375 2380 2385 2390 2395 2400 2405 2410 2415
*      *      *      *      *
TTT GCG CTC TCT AGG AAC ATC TAC TCC GCA GAC TAC TAC AAA GCT GAT GGA AAC GAT
F G L S R N I Y S A D Y Y K A D G N D>

```

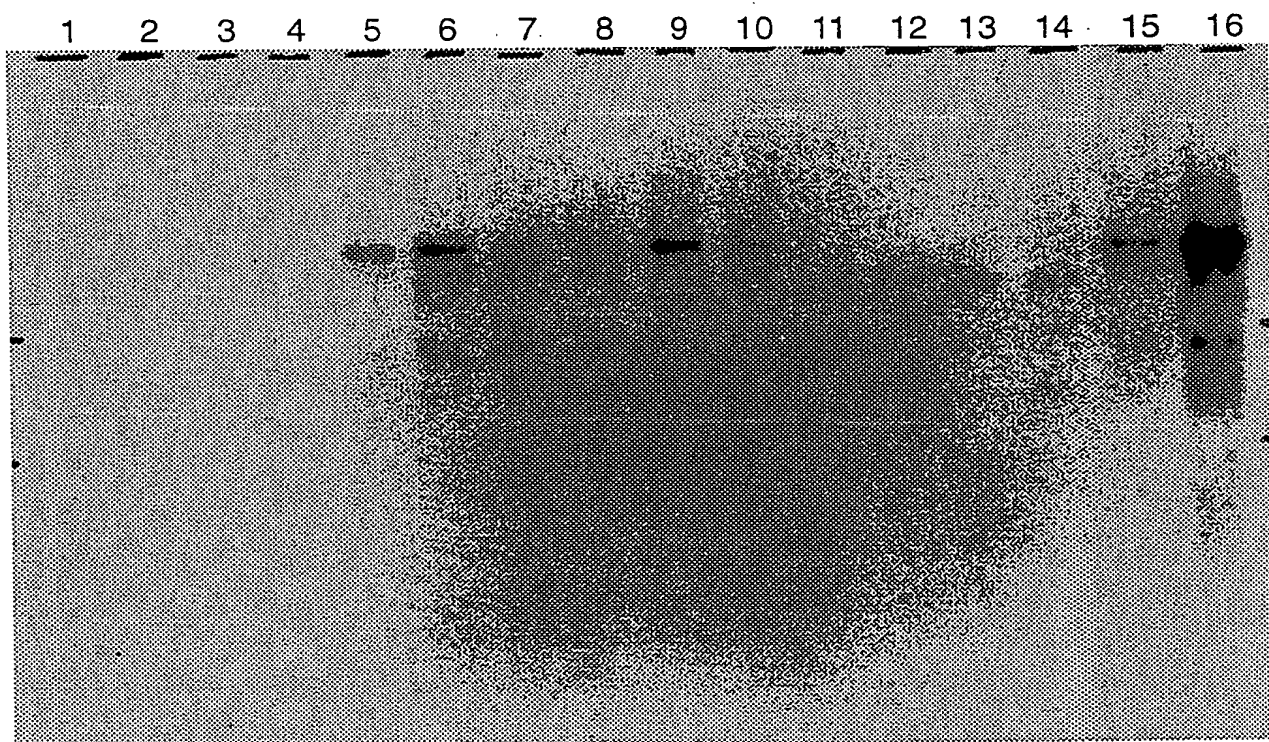
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Fig. 1D

2420 2425 2430 2435 2440 2445 2450 2455 2460 2465 2470  
 \* \* \* \* \*  
 GCT ATA OCT ATC OGC TGG ATG OCA OCC GAG TCT ATC TTC TAC AAC OGC TAC AOC AOC  
 A I P I R W H P P E S I F Y N R Y T T>  
 2475 2480 2485 2490 2495 2500 2505 2510 2515 2520 2525 2530  
 \* \* \* \* \*  
 GAG TCA GAT GTG TGG GCT TAT GGC GTG GTC CTC TGG GAG ATC TTC TCC TAT GGA CTG  
 E S D V W A Y G V V L W E I F S Y G L>  
 2535 2540 2545 2550 2555 2560 2565 2570 2575 2580 2585  
 \* \* \* \* \*  
 CAG OCC TAC TAT GGA ATG GOC CAT GAG GAG GTC ATT TAC TAT GTG AGA GAT GGT AAC  
 Q P Y Y G H A H E E V I Y Y V R D G N>  
 2590 2595 2600 2605 2610 2615 2620 2625 2630 2635 2640 2645  
 \* \* \* \* \*  
 ATC CTT GOC TGC OCT GAG AAC TGT OCC TTG GAA CTG TAC AAC CTT ATG OGC CTA TGT  
 I L A C P E N C P L E L Y N L H R L C>  
 2650 2655 2660 2665 2670 2675 2680 2685 2690 2695 2700  
 \* \* \* \* \*  
 TGG AGC AAG CTG OCT GCA GAC AGA OCC AGC TTC TGC AGT ATC CAC OGC ATC CTG CAG  
 W S K L P A D R P S F C S I H R I L Q>  
 2705 2710 2715 2720 2725 2730 2735 2740 2745 2750 2755 2760  
 \* \* \* \* \*  
 OGC ATG TGC GAG AGA GCA GAG GGA AOC GTA GGC GTC TAA GGTGACCA TGCTCAACA  
 R H C E R A E G T V G V \*>  
 2765 2770 2775 2780 2785 2790 2795 2800 2805 2810 2815 2820 2825 2830  
 \* \* \* \* \*  
 ACAOCCAGGA GGATCTTTTC AGACTGOGAG CTGGAGGGAT OCTAAAGCAG AGGGCGNATA AGTNCAGATA  
 2835 2840 2845 2850 2855 2860 2865  
 \* \* \* \* \*  
 GGAAGAGTTT ATCTCAGGCA GCAOGTNCAG TTGGTTGTT

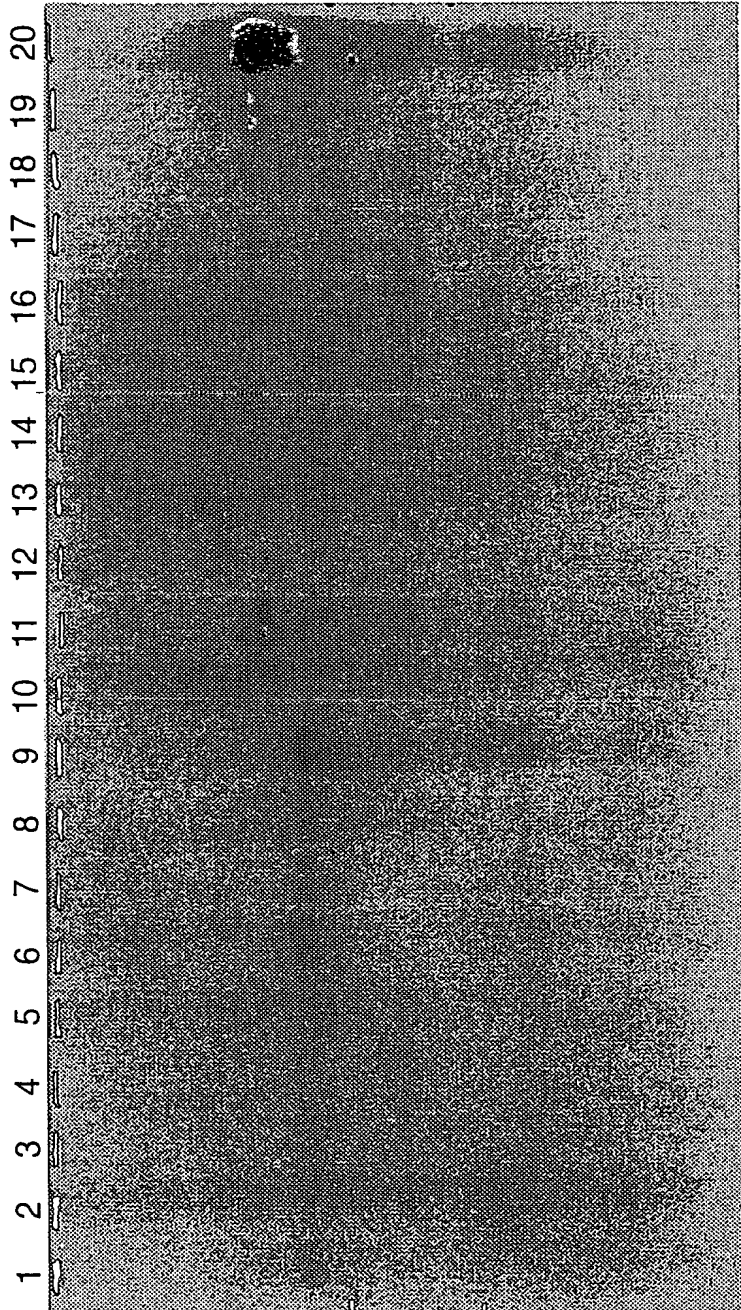
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Fig.2.



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Fig.3.



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Fig. 4A

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      10      20      30      40      50      60
      *      *      *      *      *      *
ATG AGA GAG CTC GTC AAC ATT CCA CTG GTA CAT ATT CTT ACT CTG GTT GGC TTC AOC GGA
H  R  E  L  V  N  I  P  L  V  H  I  L  T  L  V  A  F  S  G

      70      80      90      100     110     120
      *      *      *      *      *      *
ACT GAG AAA CTT CCA AAA GCT OCT GTC ATC AOC ACT OCT CTT GAA ACA GTG GAT GOC TTA
T  E  K  L  P  K  A  P  V  I  T  T  P  L  E  T  V  D  A  L

      130     140     150     160     170     180
      *      *      *      *      *      *
GTT GAA GAA GTG OCT ACT TTC ATG TGT GCA GTG GAA TCC TAC CCC CAG OCT GAG ATT TCC
V  E  E  V  A  T  F  H  C  A  V  E  S  Y  P  Q  P  E  I  S

      190     200     210     220     230     240
      *      *      *      *      *      *
TGG ACT AGA AAT AAA ATT CTC ATT AAA CTC TTT GAC AOC CCC TAC AGC ATC CGG GAG AAT
H  T  R  N  K  I  L  I  K  L  F  D  T  R  Y  S  I  R  E  N

      250     260     270     280     290     300
      *      *      *      *      *      *
GGG CAG CTC CTC ACC ATC CTG AGT GTG GAA GAC AGT GAT GAT GGC ATT TAC TGC TGC ACG
G  Q  L  L  T  I  L  S  V  E  D  S  D  D  G  I  Y  C  C  T

      310     320     330     340     350     360
      *      *      *      *      *      *
GCC AAC AAT GGT GTG GGA GGA GCT GTG GAG AGT TGT GGA GGC CTG CAA GTG AAG ATG AAA
A  N  N  G  V  G  G  A  V  E  S  C  G  A  L  Q  V  K  H  K

      370     380     390     400     410     420
      *      *      *      *      *      *
OCT AAA ATA ACT CGC OCT CCC ATA AAT GTG AAA ATA ATA GAG GGA TTA AAA GCA GTC CTA
P  K  I  T  R  P  P  I  N  V  K  I  I  E  G  L  K  A  V  L

      430     440     450     460     470     480
      *      *      *      *      *      *
CCA TGT ACT ACA ATG GGT AAT CCC AAA CCA TCA GTG TCT TGG ATA AAG GGA GAC AGC CCT
P  C  T  T  H  G  N  P  K  P  S  V  S  W  I  K  G  D  S  P

      490     500     510     520     530     540
      *      *      *      *      *      *
CTC AGG GAA AAT TCC CGA ATT GCA GTT CTT GAA TCT GGG AGC TTG AGG ATT CAT AAC GTA
L  R  E  N  S  R  I  A  V  L  E  S  G  S  L  R  I  H  N  V

      550     560     570     580     590     600
      *      *      *      *      *      *
CAA AAG GAA GAT GCA GGA CAG TAT CGA TGT GTG GCA AAA AAC AGC CTC GGG ACA GCA TAT
Q  K  E  D  A  G  Q  Y  R  C  V  A  K  N  S  L  G  T  A  Y

      610     620     630     640     650     660
      *      *      *      *      *      *
TCC AAA GTG GTG AAG CTG GAA GTT GAG GTT TTT GCC AGG ATC CTG CGG GCT CCT GAA TCC
S  K  V  V  K  L  E  V  E  V  F  A  R  I  L  R  A  P  E  S

      670     680     690     700     710     720
      *      *      *      *      *      *
CAC AAT GTC ACC TTT GGC TCC TTT GTG ACC CTG CAC TGT ACA GCA ACA GGC ATT CCT GTC
H  N  V  T  F  G  S  F  V  T  L  H  C  T  A  T  G  I  P  V

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Fig. 4B

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      730      740      750      760      770      780
      *      *      *      *      *      *
OCC ACC ATC ACC TGG ATT GAA AAC GGA AAT GCT GTT TCT TCT GGG TCC ATT CAA GAG AGT
 P  T  I  T  W  I  E  N  G  N  A  V  S  S  G  S  I  Q  E  S

      790      800      810      820      830      840
      *      *      *      *      *      *
GTG AAA GAC CGA GTG ATT GAC TCA AGA CTG CAG CTG TTT ATC ACC AAG CCA GGA CTC TAC
 V  K  D  R  V  I  D  S  R  L  Q  L  F  I  T  K  P  G  L  Y

      850      860      870      880      890      900
      *      *      *      *      *      *
ACA TGC ATA GCT ACC AAT AAG CAT GGG GAG AAG TTC AGT ACT GGC AAG GCT GCA GCC ACC
 T  C  I  A  T  N  K  H  G  E  K  F  S  T  A  K  A  A  A  T

      910      920      930      940      950      960
      *      *      *      *      *      *
ATC AGC ATA GCA GAA TGG AGT AAA CCA CAG AAA GAT AAC AAA GGC TAC TGC GCC CAG TAC
 I  S  I  A  E  W  S  K  P  Q  K  D  N  K  G  Y  C  A  Q  Y

      970      980      990      1000      1010      1020
      *      *      *      *      *      *
AGA GGG GAG GTG TGT AAT GCA GTC CTG GCA AAA GAT GCT CTT GTT TTT CTC AAC ACC TCC
 R  G  E  V  C  N  A  V  L  A  K  D  A  L  V  F  L  N  T  S

      1030      1040      1050      1060      1070      1080
      *      *      *      *      *      *
TAT GCG GAC CCT GAG GAG GCC CAA GAG CTA CTG GTC CAC ACG GGC TGG AAT GAA CTG AAA
 Y  A  D  P  E  E  A  Q  E  L  L  V  H  T  A  W  N  E  L  K

      1090      1100      1110      1120      1130      1140
      *      *      *      *      *      *
GTA GTG AGC CCA GTC TGC CGG CCA GCT GCT GAG GCT TTG TTG TGT AAC CAC ATC TTC CAG
 V  V  S  P  V  C  R  P  A  A  E  A  L  L  C  N  H  I  F  Q

      1150      1160      1170      1180      1190      1200
      *      *      *      *      *      *
GAG TGC AGT CCT GGA GTA GTG CCT ACT CCT ATT CCC ATT TGC AGA GAG TAC TGC TTG GCA
 E  C  S  P  G  V  V  P  T  P  I  P  I  C  R  E  Y  C  L  A

      1210      1220      1230      1240      1250      1260
      *      *      *      *      *      *
GTA AAG GAG CTC TTC TGC GCA AAA GAA TGG CTG GTA ATG GAA GAG AAG ACC CAC AGA GGA
 V  K  E  L  F  C  A  K  E  W  L  V  H  E  E  K  T  H  R  G

      1270      1280      1290      1300      1310      1320
      *      *      *      *      *      *
CTC TAC AGA TCC GAG ATG CAT TTG CTG TCC GTG CCA GAA TGC AGC AAG CTT CCC AGC ATG
 L  Y  R  S  E  H  H  L  L  S  V  P  E  C  S  K  L  P  S  H

      1330      1340      1350      1360      1370      1380
      *      *      *      *      *      *
CAT TGG GAC CCC ACG GCC TGT GCC AGA CTG CCA CAT CTA GAT TAT AAC AAA GAA AAC CTA
 H  W  D  P  T  A  C  A  R  L  P  H  L  D  Y  N  K  E  N  L

      1390      1400      1410      1420      1430      1440
      *      *      *      *      *      *
AAA ACA TTC CCA CCA ATG ACG TCC TCA AAG CCA AGT GTG GAC ATT CCA AAT CTG CCT TCC
 K  T  F  P  P  M  T  S  S  K  P  S  V  D  I  P  N  L  P  S

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Fig. 4C

1450	1460	1470	1480	1490	1500
TCC TCC TCT TCT TCC TTC TCT GTC TCA CCT ACA TAC TCC ATG ACT GTA ATA ATC TCC ATC					
S S S S S F S V S P T Y S H T V I I S I					
1510	1520	1530	1540	1550	1560
ATG TCC AGC TTT GCA ATA TTT GTG CTT CTT ACC ATA ACT ACT CTC TAT TGC TGC CGA AGA					
K S S F A I F V L L T I T T L Y C C R R					
1570	1580	1590	1600	1610	1620
AGA AAA CAA TGG AAA AAT AAG AAA AGA GAA TCA GCA GCA GTA ACC CTC ACC ACA CTG CCT					
R K Q W K N K K R E S A A V T L T T L P					
1630	1640	1650	1660	1670	1680
TCT GAG CTC TTA CTA GAT AGA CTT CAT CCC AAC CCC ATG TAC CAG AGG ATG CCG CTC CTT					
S E L L L D R L H P H P H Y Q R H P L L					
1690	1700	1710	1720	1730	1740
CTG AAC CCC AAA TTG CTC AGC CTG GAG TAT OCA AGG AAT AAC ATT GAA TAT GTG AGA GAC					
L N P K L L S L E Y P R N N I E Y V R D					
1750	1760	1770	1780	1790	1800
ATC GGA GAG GGA GCG TTT GGA AGG GTG TTT CAA GCA AGG OCA OCA GGC TTA CTT CCG TAT					
I G E G A F G R V F Q A R A P G L L P Y					
1810	1820	1830	1840	1850	1860
GAA CCT TTC ACT ATG GTG GCA GTA AAG ATG CTC AAA GAA GAA GCC TCG GCA GAT ATG CAA					
E P F T H V A V K K L K E E A S A D H Q					
1870	1880	1890	1900	1910	1920
GCG GAC TTT CAG AGG GAG GCA GCC CTC ATG GCA GAA TTT GAC AAC OCT AAC ATT GTG AAG					
A D F Q R E A A L H A E F D N P H I V K					
1930	1940	1950	1960	1970	1980
CTA TTA GGA GTG TGT GCT GTC GGG AAG CCA ATG TGC CTG CTC TTT GAA TAC ATG GCC TAT					
L L G V C A V G K P H C L L F E Y H A Y					
1990	2000	2010	2020	2030	2040
GGT GAC CTC AAT GAG TTC CTC CGC AGC ATG TCC CCT CAC ACC GTG TGC AGC CTC AGT CAC					
G D L N E F L R S H S P H T V C S L S H					
2050	2060	2070	2080	2090	2100
AGT GAC TTG TCT ATG AGG GCT CAG GTC TCC AGC CCT GGG CCC CCA CCC CTC TCC TGT GCT					
S D L S H R A Q V S S P G P P P L S C A					
2110	2120	2130	2140	2150	2160
GAG CAG CTT TGC ATT GCC AGG CAG GTG GCA GCT GGC ATG GCT TAC CTC TCA GAA CGT AAG					
E Q L C I A R Q V A A G H A Y L S E R K					

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Fig. 4D

2170	2180	2190	2200	2210	2220
TTT GTT CAC CGA GAT TTA GCC AOC AGG AAC TGC CTG GTG GOC GAG AAC ATG GTG GTG AAA					
F V H R D L A T R N C L V G E N K V V K					
2230	2240	2250	2260	2270	2280
ATT GCC GAC TTT GGC CTC TCC AGG AAC ATC TAC TCA OCA GAC TAC TAC AAA GCT AAT GAA					
I A D F G L S R H I Y S A D Y Y K A N E					
2290	2300	2310	2320	2330	2340
AAC GAC GCT ATC OCT ATC OCT TGG ATG OCA OCA GAG TCC ATT TTT TAT AAC CGC TAC ACT					
N D A I P I R W H P P E S I F Y N R Y T					
2350	2360	2370	2380	2390	2400
ACA GAG TCT GAT GTG TGG GCC TAT GGC GTG GTC CTC TGG GAG ATC TTC TCC TAT GGC CTG					
T E S D V W A Y G V V L W E I F S Y G L					
2410	2420	2430	2440	2450	2460
CAG OCC TAC TAT GGG ATG GCC CAT GAG GAG GTC ATT TAC TAC GTG OGA GAT GGC AAC ATC					
Q P Y Y G H A H E E V I Y Y V R D G N I					
2470	2480	2490	2500	2510	2520
CTC TCC TGC OCT GAG AAC TGC OCC GTG GAG CTG TAC AAT CTC ATG CGT CTA TGT TGG AGC					
L S C P E H C P V E L Y N L H R L C W S					
2530	2540	2550	2560	2570	2580
AAG CTG OCT GCA GAC AGA OCC AGT TTC ACC AGT ATT CAC OGA ATT CTG GAA CGC ATG TGT					
K L P A D R P S F T S I H R I L E R H C					
2590	2600	2610			
GAG AGG GCA GAG OGA ACT GTG AGT GTC TAA					
E R A E G T V S V					

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Fig.5.

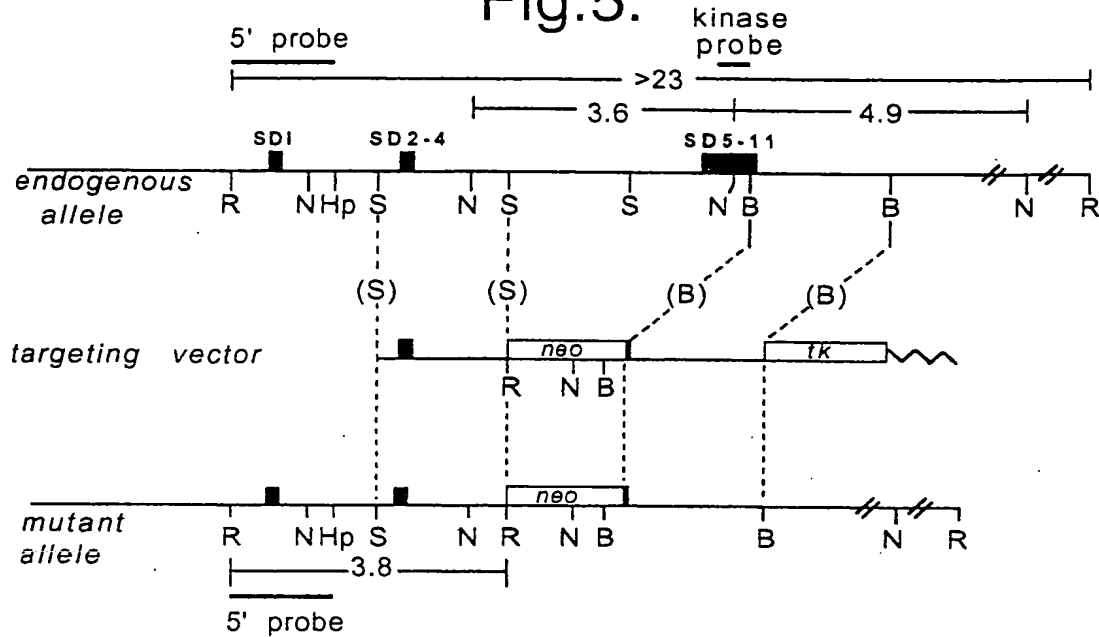


Fig.6.

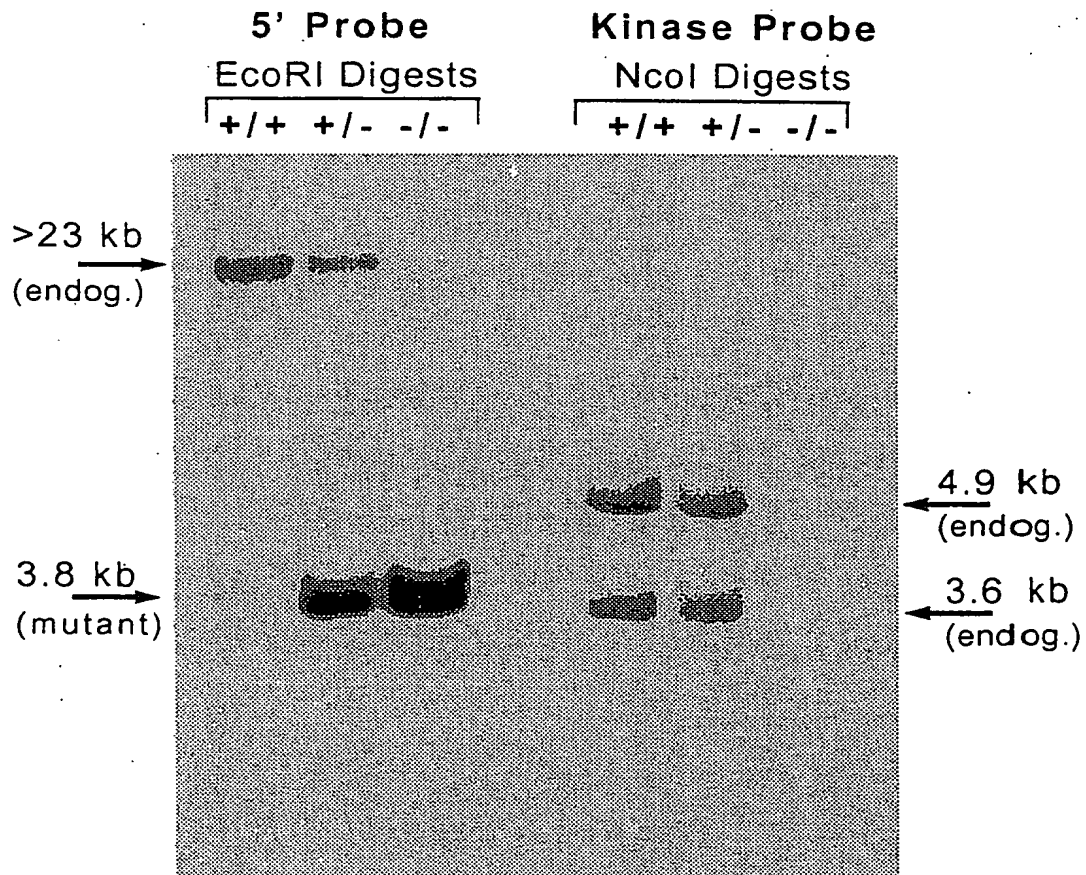


Fig.7A.

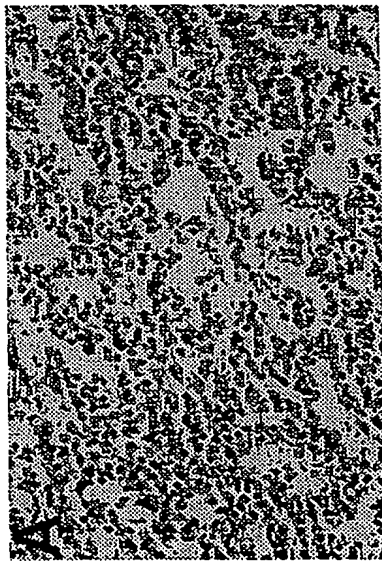


Fig.7B.

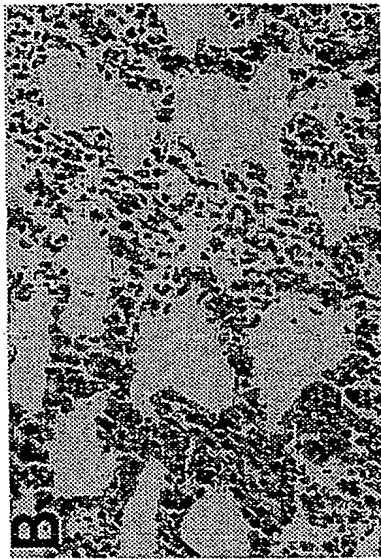
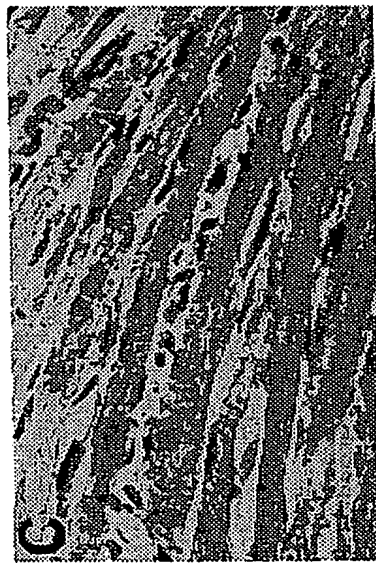


Fig.7C.



MuSK -/-

Fig.7D.



CONTROL

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Fig.8A.

Control



MuSK<sup>-/-</sup>

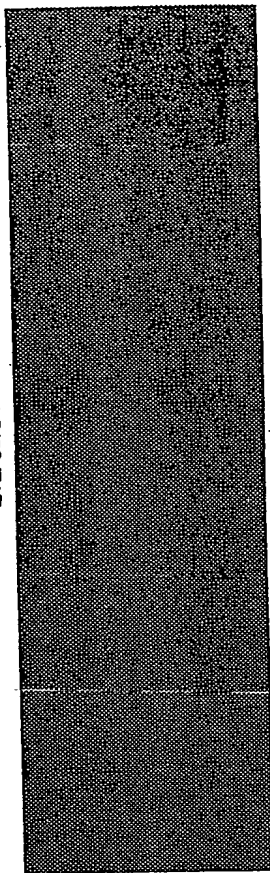


Fig.8B.

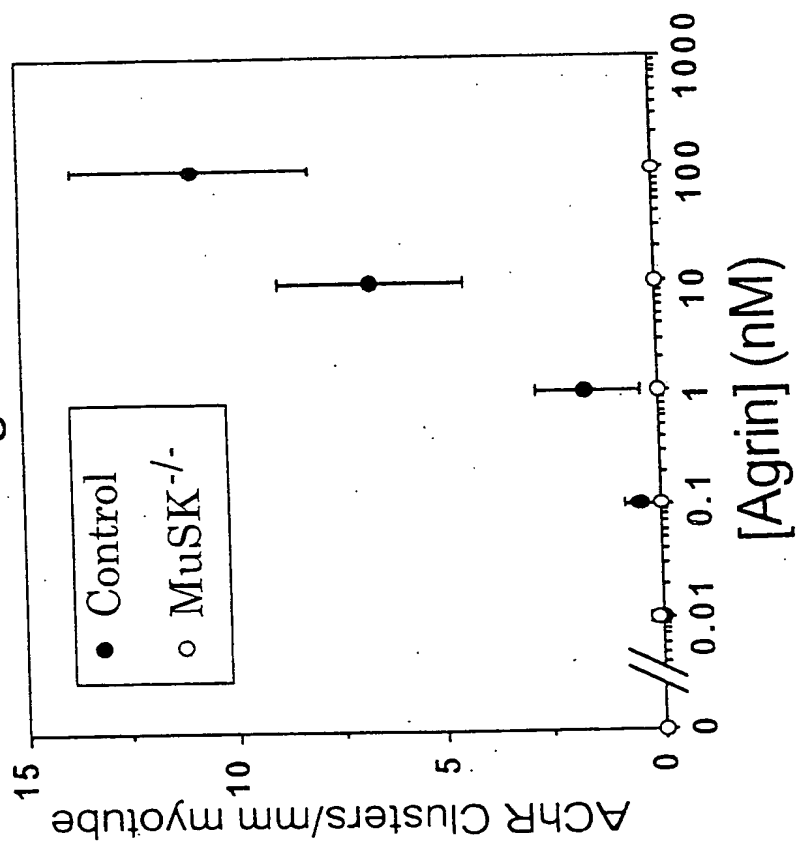
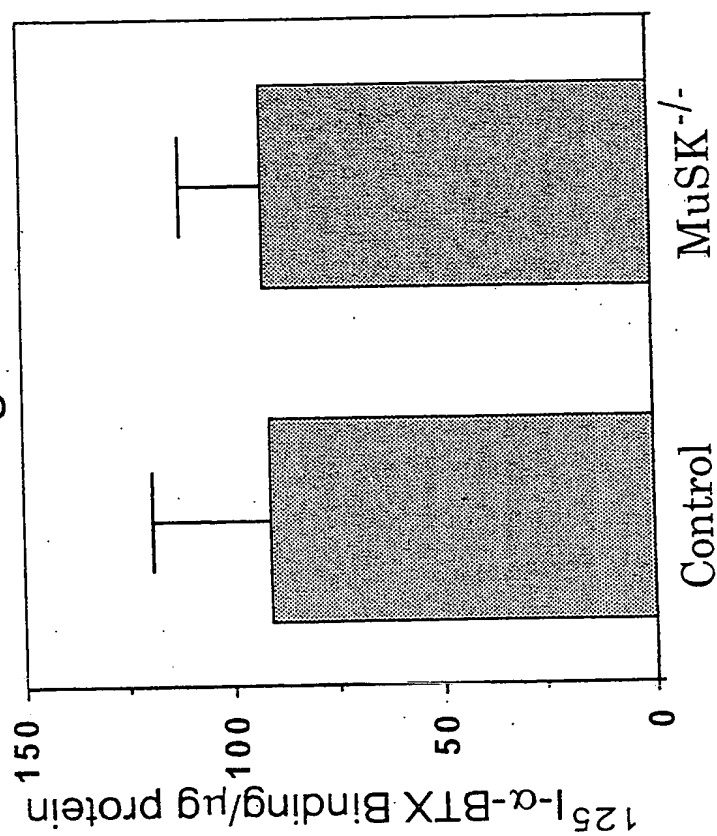


Fig.8C.



100M FT M 115004 91001

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Fig.9A.

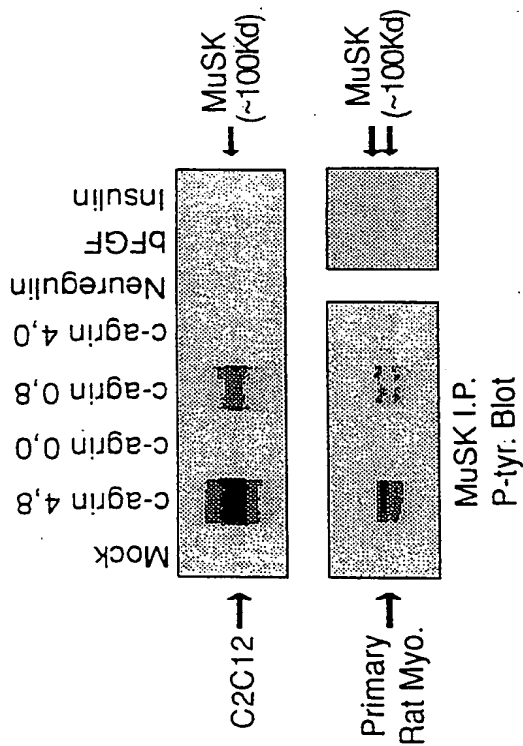


Fig.9B.

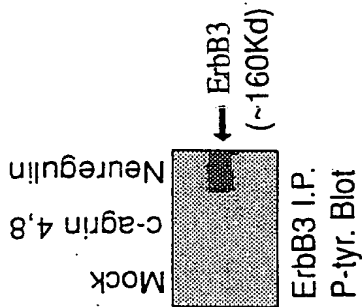


Fig.9C.

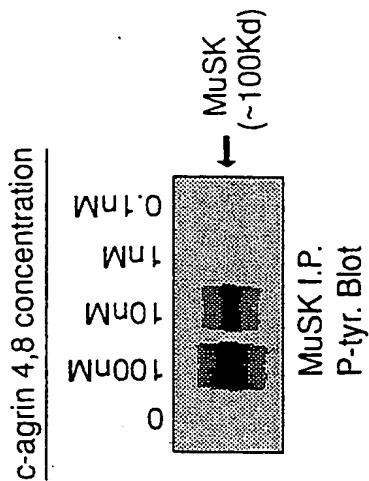
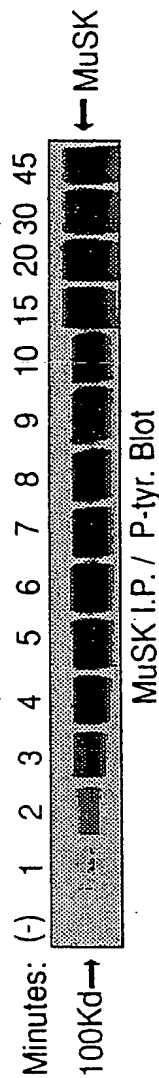
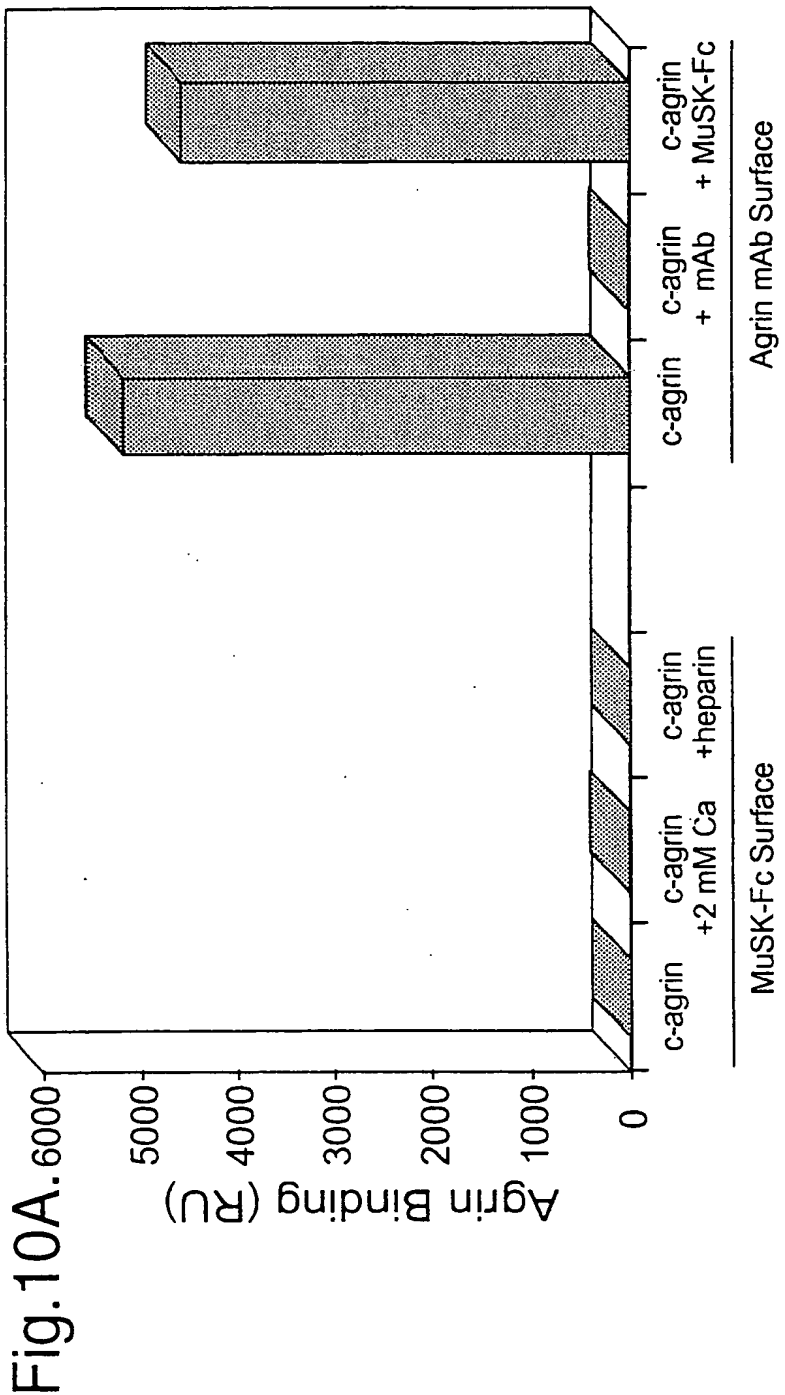
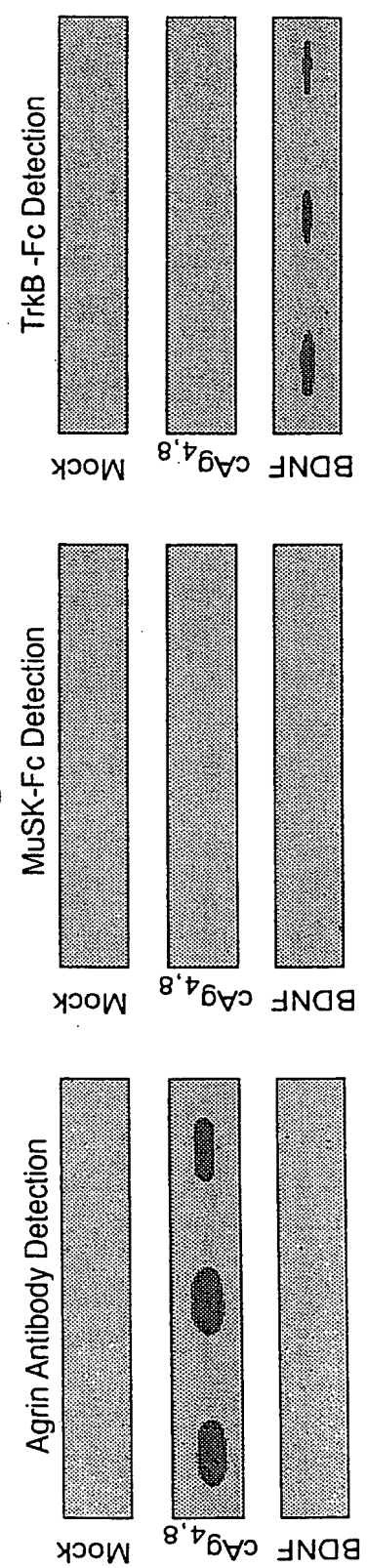


Fig.9D.



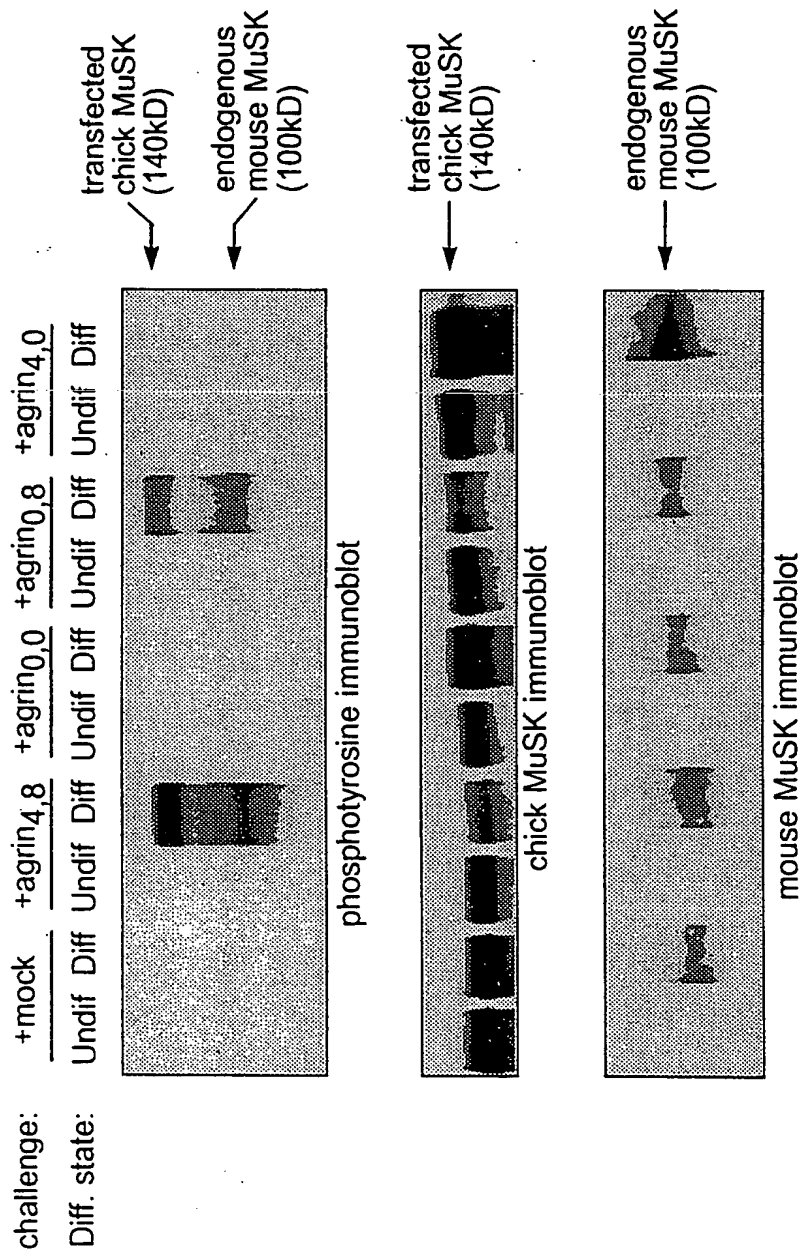


**Fig. 10B:**



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Fig.11.

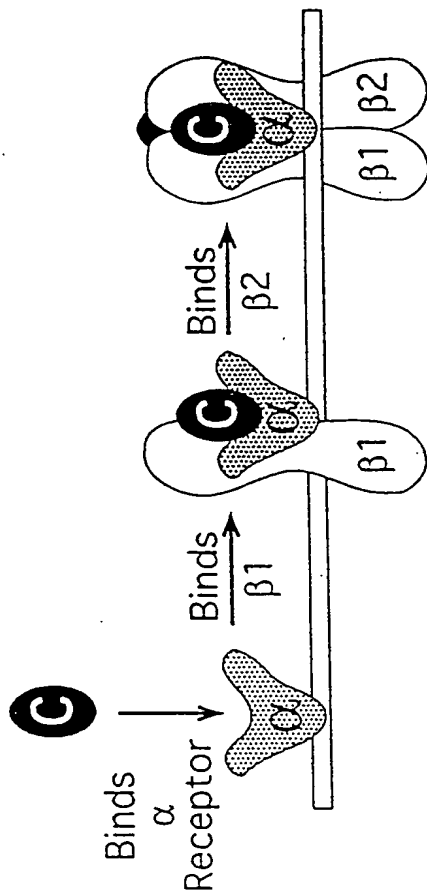


1001613.113001

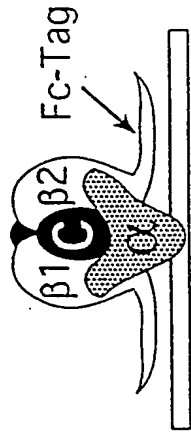


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Fig. 12.  
A. Formation of CNTF Receptor Complex



B. CNTF Receptor Complex With Soluble  $\beta$  Components



C. Formation of Receptor Complex For Agrin

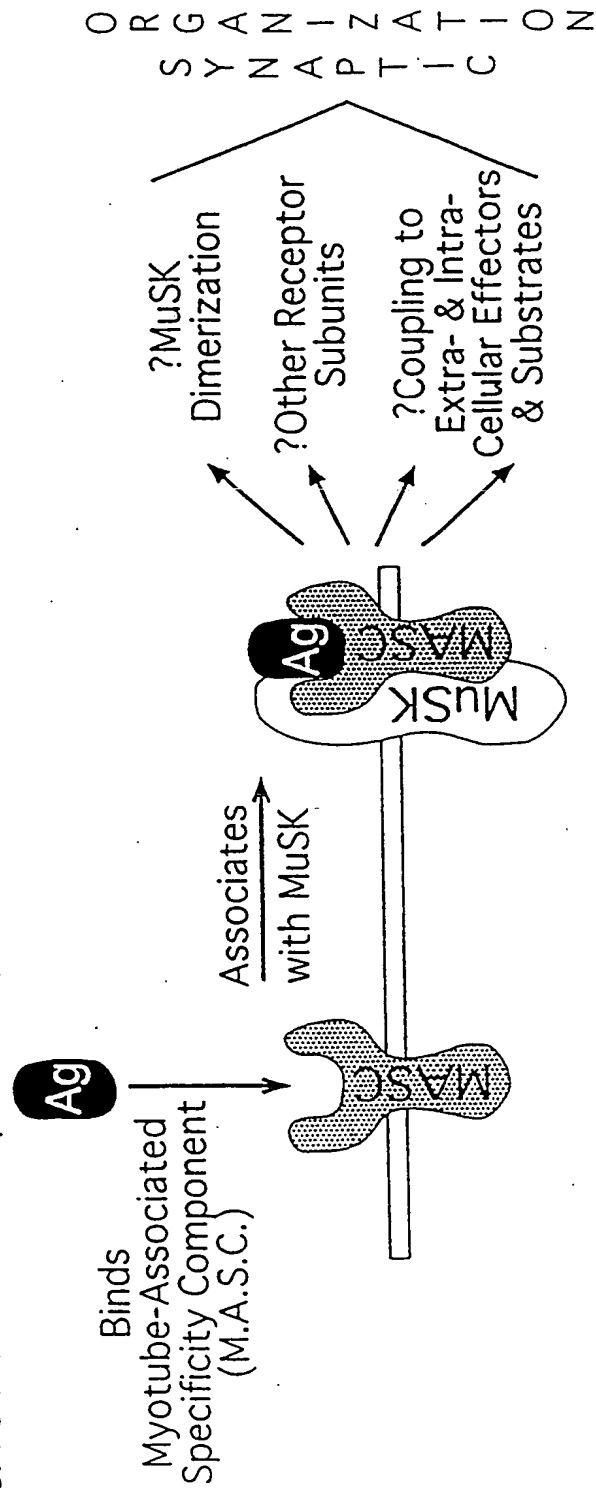


Fig.13A.

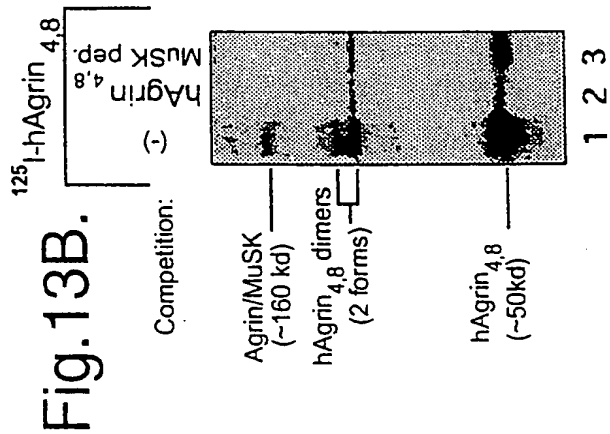
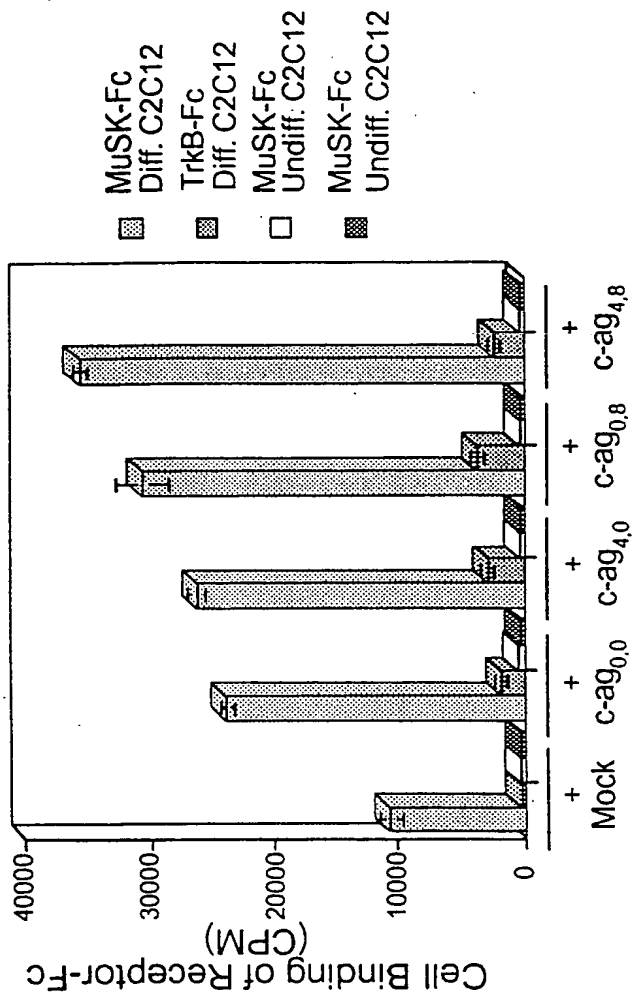
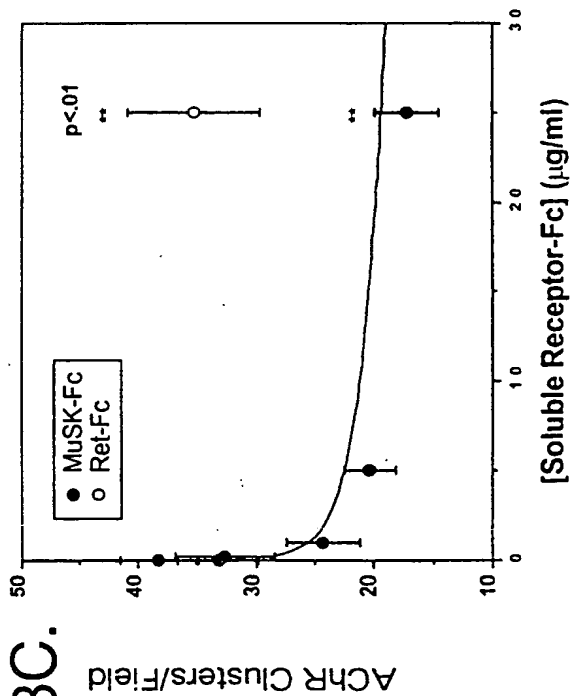


Fig.13B.

Fig.13C.



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Fig. 14A

10	20	30	40	50	60
* *	* *	* *	* *	* *	* *
MPPLPLEHRP	RQEPGASMLV	RYFMIPCNIC	LILLATSTLG	FAVLLFLSNY	KPGIHFTPAP
70	80	90	100	110	120
* *	* *	* *	* *	* *	* *
PTPPDVCRGM	LCGFGAVCEP	SVEDPGRASC	VCKKNACPAT	VAPVCGSDAS	TYSNECELQR
130	140	150	160	170	180
* *	* *	* *	* *	* *	* *
AQCNQRRIR	LLRQGPGCSR	DPCANVTCSF	GSTCVPSADG	QTASCLCPTT	CFGAPDGTVC
190	200	210	220	230	240
* *	* *	* *	* *	* *	* *
GSDGVDYPSE	CQLLSHACAS	QEHIFKKFNG	PCDPCQGSMS	DLNHICRVNP	RTRHPEMLLR
250	260	270	280	290	300
* *	* *	* *	* *	* *	* *
PENCPAQHTP	ICGDDGVTYE	NDCVMSRIGA	TRGLLLQKVR	SGQCQTRDQC	PETCQFN SVC
310	320	330	340	350	360
* *	* *	* *	* *	* *	* *
LSRRGRPHCS	CDRVTC DGSY	RPVCAQDGHT	YNND CWRQQA	ECRQQR AIPP	KHQGPCDQTP
370	380	390	400	410	420
* *	* *	* *	* *	* *	* *
SPCHGVQCAF	GAVCTVKNGK	AEC ECQ RVCS	GIYDPVCGSD	GVTYGSVCEL	ESMACTLGRE
430	440	450	460	470	480
* *	* *	* *	* *	* *	* *
IQVARRGPCD	PCGQCRFGSL	CEVETGRCVC	PSECVESAQP	VCGSDGHTYA	SECELHVHAC
490	500	510	520	530	540
* *	* *	* *	* *	* *	* *
THQISLYVAS	AGHCQTCGEK	VCTFGAVCSA	GQCVCPRCEH	PPPGPVCGSD	GVTYLSACEL
550	560	570	580	590	600
* *	* *	* *	* *	* *	* *
REAACQQQVQ	IEEAHAGPCE	PAECGSGGSG	SGEDDECEQE	LCRQRGGIWD	EDSEDGPCVC
610	620	630	640	650	660
* *	* *	* *	* *	* *	* *
DFSCQSVPRS	PVCGSDGVTY	GTECDLKKAR	CESQQELYVA	AQGACRGPTL	APLLPVAFPH
670	680	690	700	710	720
* *	* *	* *	* *	* *	* *
CAQTPYGCCQ	DNFTAAQGVG	LAGCPSTCHC	NPHGSYSGTC	DPATGQCSCR	PGVGGLRCDR
730	740	750	760	770	780
* *	* *	* *	* *	* *	* *
CEPGFWNFRG	IVTDGHS GCT	PCSCDPRGAV	RDDCEQMTGL	CSCRPGVAGP	KCGQCPDGQV
790	800	810	820	830	840
* *	* *	* *	* *	* *	* *
LGHLCCEADP	MTPVTCVEIH	CEFGASCVEK	AGFAQCICPT	LTCPEANSTK	VCGSDGVTYG

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Fig. 14B

850	860	870	880	890	900
* *	* *	* *	* *	* *	* *
NECQLKAIAC	RQRLDISTQS	LGPCQESVTP	GASPTSASMT	TPRHILSKTL	PFPHNSLPLS
910	920	930	940	950	960
* *	* *	* *	* *	* *	* *
PGSTTHDWPT	PLPISPHTTV	SIPRSTAWPV	LTVPPTAAAS	DVTSLSITSIF	SESGSANGSG
970	980	990	1000	1010	1020
* *	* *	* *	* *	* *	* *
DEELSGDEEA	SGGGSGGLEP	PVGSIVVTHG	PPIERASCYN	SPLGCCSDGK	TPSLDSEGSN
1030	1040	1050	1060	1070	1080
* *	* *	* *	* *	* *	* *
CPATKAFQGV	LELEGVEGQE	LFYTPEMADP	KSELFGETAR	SIESTLDDLF	RNSDVKKDFW
1090	1100	1110	1120	1130	1140
* *	* *	* *	* *	* *	* *
SVRLRELPG	KLVRIVDVH	FDPTTAFQAS	DVGQALLRQI	QVSRPWALAV	RRPLQEHVRF
1150	1160	1170	1180	1190	1200
* *	* *	* *	* *	* *	* *
LDFDWFPTEF	TGAATGTAA	MATARATTVS	RLPASSVTPR	VYPSHTSRPV	GRTTAPPTTR
1210	1220	1230	1240	1250	1260
* *	* *	* *	* *	* *	* *
RPPTTATNMD	RPRTPGHQQP	SKSCDSQPCL	HGGTCQDQDS	GKGFTCSCTA	GRGGSVCEKV
1270	1280	1290	1300	1310	1320
* *	* *	* *	* *	* *	* *
QPPSMPAFKG	HSFLAFPTLR	AYHTLRLALE	FRALETEGLL	LYNGNARGKD	FLALALLDGR
1330	1340	1350	1360	1370	1380
* *	* *	* *	* *	* *	* *
VQFRFDTGSG	PAVLTSLVPV	EPGRWHRLEL	SRHWRQGTLS	VDGETPVVGE	SPSGTDGLNL
1390	1400	1410	1420	1430	1440
* *	* *	* *	* *	* *	* *
DTNLYVGGIP	EEQVAMVLDL	TSVGVLKGC	IRMLDINNQQ	LELSDWQRAA	VQSSGVGECG
1450	1460	1470	1480	1490	1500
* *	* *	* *	* *	* *	* *
DHPCLPNPCH	GGALCQALEA	GMFLCQCPPG	RFGPTCADEK	SPCQPNPCHG	AAPCRVLSSG
1510	1520	1530	1540	1550	1560
* *	* *	* *	* *	* *	* *
GAKCECPLGR	SGTFCQTVLE	TAGSRPFLAD	FNGFSYLELK	GLHTFERDLG	EKMALEMVFL
1570	1580	1590	1600	1610	1620
* *	* *	* *	* *	* *	* *
ARGPSGLLLY	NGQKTDGKGD	FVSLALHNRH	LEFCYDLGKG	AAVIRSKEPI	ALGTWVRVFL
1630	1640	1650	1660	1670	1680
* *	* *	* *	* *	* *	* *
ERNGRKGALQ	VGDGPRVLGE	SPKSRKVPHT	MLNLKEPLYI	GGAPDFSKLA	RGAAVSSGFS



Y-site

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Fig. 14C

1690	1700	1710	1720	1730	1740
* *	* *	* *	* *	* *	* *
GVIQLVSLRG	HQLLTQEHVL	RAVDVSPFAD	HPCTQALGNP	CLNGGSCVPR	EATYECLCPG
1750	1760	1770	1780	1790	1800
* *	* *	* *	* *	* *	* *
GFSGLHCEKG	LVEKSVGDLE	TLAFDGRTYI	EYLNAVIESE	KALQSNHFEL	SLRTEATQGL
1810	1820	1830	1840	1850	1860
* *	* *	* *	* *	* *	* *
VLWIGKAAER	ADYMALAIVD	GHLQLSYDLG	SQPVVLRSTV	KVNTNRWLRI	RAHREHREGS
1870	1880	1890	1900	1910	1920
* *	* *	* *	* *	* *	* *
LQVGNEAPVT	GSSPLGATQL	DTDGALWLGG	LQKLPVGQAL	PKAYGTGFVG	CLRDVVVGHR
1930	1940				
* *	* *				
QLHLLEDAVT	KPELRPCPTP	*			

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Fig. 15A

ATG	TCT	GCA	CTT	CTG	ATC	CTA	GCT	CTT	GTT	GGA	GCT	GCA	GTT	GCT	GAC
M	S	A	L	L	I	L	A	L	V	G	A	A	V	A	D
TAC	AAA	GAC	GAT	GAC	GAC	AAG	AAG	AGC	CCC	TGC	CAG	CCC	AAC	CCC	TGC
Y	K	D	D	D	D	K	K	S	P	C	Q	P	N	P	C
CAT	GGG	GCG	GCG	CCC	TGC	CGT	GTG	CTG	CCC	GAG	GGT	GGT	GCT	CAG	TGC
H	G	A	A	P	C	R	V	L	P	E	G	G	A	Q	C
GAG	TGC	CCC	CTG	GGG	CGT	GAG	GGC	ACC	TTC	TGC	CAG	ACA	GCC	TCG	GGG
E	C	P	L	G	R	E	G	T	F	C	Q	T	A	S	G
CAG	GAC	GGC	TCT	GGG	CCC	TTC	CTG	GCT	GAC	TTC	AAC	GGC	TTC	TCC	CAC
Q	D	G	S	G	P	F	L	A	D	F	N	G	F	S	H
CTG	GAG	CTG	AGA	GGC	CTG	CAC	ACC	TTT	GCA	CGG	GAC	CTG	GGG	GAG	AAG
L	E	L	R	G	L	H	T	F	A	R	D	L	G	E	K
ATG	GCG	CTG	GAG	GTC	GTG	TTC	CTG	GCA	CGA	GGC	CCC	AGC	GGC	CTC	CTG
M	A	L	E	V	V	F	L	A	R	G	P	S	G	L	L
CTC	TAC	AAC	GGG	CAG	AAG	ACG	GAC	GGC	AAG	GGG	GAC	TTC	GTG	TCG	CTG
L	Y	N	G	Q	K	T	D	G	K	G	D	F	V	S	L
GCA	CTG	CGG	GAC	CGC	CGC	CTG	GAG	TTC	CGC	TAC	GAC	CTG	GGC	AAG	GGG
A	L	R	D	R	R	L	E	F	R	Y	D	L	G	K	G
GCA	GCG	GTC	ATC	AGG	AGC	AGG	GAG	CCA	GTC	ACC	CTG	GGA	GCC	TGG	ACC
A	A	V	I	R	S	R	E	P	V	T	L	G	A	W	T
AGG	GTC	TCA	CTG	GAG	CGA	AAC	GGC	CGC	AAG	GGT	GCC	CTG	CGT	GTG	GGC
R	V	S	L	E	R	N	G	R	K	G	A	L	R	V	G
GAC	GGC	CCC	CGT	GTG	TTG	GGG	GAG	TCC	CCG	AAA	TCC	CGC	AAG	GTG	CCG
D	G	P	R	V	L	G	E	S	P	K	S	R	K	V	P
CAC	ACC	GTC	CTC	AAC	CTG	AAG	GAG	CCG	CTC	TAC	GTA	GGG	GGC	GCT	CCC
H	T	V	L	N	L	K	E	P	L	Y	V	G	G	A	P
GAC	TTC	AGC	AAG	CTG	GCC	CGT	GCT	GCT	GCC	GTG	TCC	TCT	GGC	TTC	GAC
D	F	S	K	L	A	R	A	A	A	V	S	S	G	F	D
GGC	GCC	ATC	CAG	CTG	GTC	TCC	CTC	GGA	GGC	CGC	CAG	CTG	CTG	ACC	CCG
G	A	I	Q	L	V	S	L	G	G	R	Q	L	L	T	P
GAG	CAC	GTG	CTG	CGG	CAG	GTG	GAC	GTC	ACG	TCC	TTT	GCA	GGT	CAC	CCC
E	H	V	L	R	Q	V	D	V	T	S	F	A	G	H	P
TGC	ACC	CGG	GCC	TCA	GGC	CAC	CCC	TGC	CTC	AAT	GGG	GCC	TCC	TGC	GTC
C	T	R	A	S	G	H	P	C	L	N	G	A	S	C	V
CCG	AGG	GAG	GCT	GCC	TAT	GTG	TGC	CTG	TGT	CCC	GGG	GGA	TTC	TCA	GGA
P	R	E	A	A	Y	V	C	L	C	P	G	G	F	S	G
CCG	CAC	TGC	GAG	AAG	GGG	CTG	GTG	GAG	AAG	TCA	GCG	GGG	GAC	GTG	GAT
P	H	C	E	K	G	L	V	E	K	S	A	G	D	V	D

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Fig. 15B

ACC	TTG	GCC	TTT	GAC	GGG	CGG	ACC	TTT	GTC	GAG	TAC	CTC	AAC	GCT	GTG		
T	L	A	F	D	G	R	T	F	V	E	Y	L	N	A	V		
ACC	GAG	AGC	GAA	CTG	GCC	AAT	GAG	ATC	CCC	GTC	Z-insert		GAG	AAG	GCA	CTG	CAG
T	E	S	E	L	A	N	E	I	P	V	E	K	A	L	Q		
AGC	AAC	CAC	TTT	GAA	CTG	AGC	CTG	CGC	ACT	GAG	GCC	ACG	CAG	GGG	CTG		
S	N	H	F	E	L	S	L	R	T	E	A	T	Q	G	L		
GTG	CTC	TGG	AGT	GGC	AAG	GCC	ACG	GAG	CGG	GCA	GAC	TAT	GTG	GCA	CTG		
V	L	W	S	G	K	A	T	E	R	A	D	Y	V	A	L		
GCC	ATT	GTG	GAC	GGG	CAC	CTG	CAA	CTG	AGC	TAC	AAC	CTG	GGC	TCC	CAG		
A	I	V	D	G	H	L	Q	L	S	Y	N	L	G	S	Q		
CCC	GTG	GTG	CTG	CGT	TCC	ACC	GTG	CCC	GTC	AAC	ACC	AAC	CGC	TGG	TTG		
P	V	V	L	R	S	T	V	P	V	N	T	N	R	W	L		
CGG	GTC	GTG	GCA	CAT	AGG	GAG	CAG	AGG	GAA	GGT	TCC	CTG	CAG	GTG	GGC		
R	V	V	A	H	R	E	Q	R	E	G	S	L	Q	V	G		
AAT	GAG	GCC	CCT	GTG	ACC	GGC	TCC	TCC	CCG	CTG	GGC	GCC	ACG	CAG	CTG		
N	E	A	P	V	T	G	S	S	P	L	G	A	T	Q	L		
GAC	ACT	GAT	GGA	GCC	CTG	TGG	CTT	GGG	GGC	CTG	CCG	GAG	CTG	CCC	GTG		
D	T	D	G	A	L	W	L	G	G	L	P	E	L	P	V		
GGC	CCA	GCA	CTG	CCC	AAG	GCC	TAC	GGC	ACA	GGC	TTT	GTG	GGC	TGC	TTG		
G	P	A	L	P	K	A	Y	G	T	G	F	V	G	C	L		
CGG	GAC	GTG	GTG	GTG	GGC	CGG	CAC	CCG	CTG	CAC	CTG	CTG	GAG	GAC	GCC		
R	D	V	V	V	G	R	H	P	L	H	L	L	E	D	A		
GTC	ACC	AAG	CCA	GAG	CTG	CGG	CCC	TGC	CCC	ACC	CCA	TGA					
V	T	K	P	E	L	R	P	C	P	T	P	*					

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Fig.16.

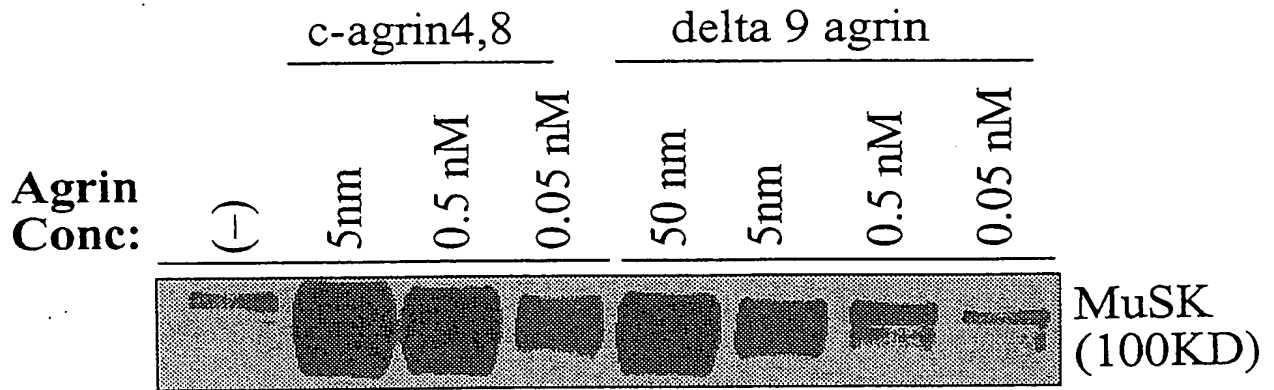


Fig.17.

